

**AMENDMENTS TO THE CLAIMS:**

Please cancel without prejudice claims 8 and 9, amend claims 5-7 and add new claims 11-19 as follows.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) A photomultiplier tube circuit comprising a photomultiplier tube having a plurality of dynodes, charging circuitry for providing charge to the plurality of dynodes and an oscillator for providing a high voltage supply to the charging circuitry characterised in that the photomultiplier tube circuit further comprises means for sampling the voltage of at least one of the dynodes and switching means for switching the oscillator on and off with respect to the at least one dynode voltage sampled.

2. (original) A photomultiplier tube circuit according to claim 1 wherein the switching means comprises a micro-controller.

3. (original) A photomultiplier tube circuit according to claim 1 or 2 wherein the switching means is configured so as to determine the length of time that the oscillator is switched to.

4. (original) A photomultiplier tube circuit according to claim 3 wherein the exposure conditions of the photomultiplier tube can be determined from the length of time that the oscillator is switched on.

5. (currently amended) A photomultiplier tube circuit according to ~~any of the preceding~~  
~~claims~~claim 1 wherein the charging circuitry is in the form of a Cockcroft Walton circuit.

6. (currently amended) A photomultiplier tube circuit according to ~~any of the preceding~~  
~~claims~~claim 1 wherein the oscillator is switched on for a set period of time at predetermined  
intervals and is switched off when the dynode voltage sampled reaches a predetermined voltage.

7. (currently amended) A radiation monitor comprising a photomultiplier tube circuit  
according to ~~any of the preceding~~ claim 1.

8. (cancelled)

9. (cancelled)

10. (cancelled)

11. (new) A photomultiplier tube circuit according to claim 2 wherein the charging  
circuitry is in the form of a Cockcroft Walton circuit.

12. (new) A photomultiplier tube circuit according to claim 3 wherein the charging  
circuitry is in the form of a Cockcroft Walton circuit.

13. (new) A photomultiplier tube circuit according to claim 4 wherein the charging circuitry is in the form of a Cockcroft Walton circuit.

14. (new) A photomultiplier tube circuit according to claim 2 wherein the oscillator is switched on for a set period of time at predetermined intervals and is switched off when the dynode voltage sampled reaches a predetermined voltage.

15. (new) A photomultiplier tube circuit according to claim 3 wherein the oscillator is switched on for a set period of time at predetermined intervals and is switched off when the dynode voltage sampled reaches a predetermined voltage.

16. (new) A photomultiplier tube circuit according to claim 4 wherein the oscillator is switched on for a set period of time at predetermined intervals and is switched off when the dynode voltage sampled reaches a predetermined voltage.

17. (new) A radiation monitor comprising a photomultiplier tube circuit according to claim 2.

18. (new) A radiation monitor comprising a photomultiplier tube circuit according to claim 3.

19. (new) A radiation monitor comprising a photomultiplier tube circuit according to claim 4.